Battle of the Beaks

Name:

Objective: Understand that animals that are better adapted to take advantage of available foods will fare better than those who are less adapted, and thus live to pass on their genes to the next generation.

Materials:
Beak types: clothespin, fork, tweezers, binder clips
Food types: paper clips, beans, rubber bands, toothpicks
Cups, stopwatch

Part 1 Procedures:

1. Within your group of 4, select your beak type (clothespin, fork, tweezer, or binder clip)
2. Each student also needs a cup, which represents the bird's stomach. The cup must remain upright at all times. You must hold the beak in one hand and the stomach in the other. You can only place food in your stomach with your beak. You may only grab one piece of food at a time. Cheaters will be eliminated!
3. A certain type of food will be placed within your feeding area. You will have 30 seconds to collect as much food as you can.
4. Once the teacher says stop, you need to empty out your stomach, count the contents, and record it in table 1.
5. We will repeat the activity with multiple food types. Copy your group member's data down as well, and then answer the questions.

Table 1:

	Pinto Beans	**Paper clips**	**Rubber Bands**	**Toothpicks**
Clothespin				
Fork				
Tweezers				
Binder Clip				

Part 1 Questions:

1. What did you notice about your feeding abilities? (What were you good at?)

   _____

   _____

2. What would happen if there was a drought and all the rubber bands died off? What would happen to the bird population?

   _____

   _____

3. What did you notice about your behavior and the behavior of others?

   _____

   _____

Part 2 Procedures:

1. Most habitats have more than one kind of food available. This round you will have different types of food to choose from.
2. Spread **all** of the materials into the feeding circle. You will have 1 minute to feed. Once the teacher says stop, you need to empty out your stomach, count the contents, and record it in table 2. Remember, only one piece of food at a time!
3. Copy your group member's data down as well, and then answer the questions.

Table 2:

	Pinto Beans	**Paper Clips**	**Rubber Bands**	**Toothpicks**
Clothespin				
Fork				
Tweezers				
Binder Clip				

Part 2 Questions:

1. What was your strategy for collecting food this round?

   _____

   _____

2. Was there another beak type that was competing for the same food source as you? If so, who?

   _____

   _____

3. Which beak collected the most food? Which beak collected the least food? We can assume the birds that collected the most food will survive and reproduce, and the birds that collected the least amount of food will die. What will the next generation of birds look like?

   _____

   _____

   _____

   _____

4. What would happen if all the bird types we have been working with flew to an island where no birds had been before, and the only type of food available was toothpicks? Which bird beak type would me the most successful? Which bird beak type would be the least successful? Explain your answer.

   _____

   _____

   _____

Class Data: (Part 2)

	Pinto Beans	Macaroni	Rubber Bands	Toothpicks
Clothespin				
Fork				
Tweezers				
Binder Clip				

Class Bar Graph: